



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
K and W Landfill, Ontonagon, Michigan

FROM: Vicky Mei, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: K and W Landfill

Facility Location: 11877 Highway M-38, Ontonagon, Michigan

Date of Virtual Inspection: September 6, 2022

EPA Inspector(s):

1. Vicky Mei, Environmental Engineer

Other Attendees:

1. Madeline Schwerinski, Engineer, Waste Management
2. Clayton Hella, District Manager, Waste Management
3. Steven Niehoff, Director of Air Programs, Waste Management
4. Gina McCann, State-wide Specialist for Land Quality, EGLE
5. Lauren Luce, Marquette District Office Inspector, EGLE

Contact Email Address: mschweri@wm.com

Purpose of Inspection: Clean Air Action Inspection

Facility Type: Municipal Solid Waste Landfill

Regulations Central to Inspection: 40 CFR 62.16718(a)(3)

Arrival Time: 1:00 PM CT

Departure Time: 1:50 PM CT

Inspection Type:

- ☐ Unannounced Inspection
- ☒ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☐ Provided Small Business Resource Information Sheet
- ☒ Small Business Resource Information Sheet not provided. Reason: Not a small business
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Waste Management staff unless otherwise noted. The inspection was conducted virtually.

Process Description: The landfill design capacity is 4.8 million cubic yards of waste. The landfill accepts about 100,00 tons of waste per year with 90% being municipal solid waste and 10% being construction and demolition waste. The waste intake rate has been consistent. The current amount of waste in place is about 2.6 million tons. The landfill was constructed and filled from east to west with the fill order from oldest to newest being Phase 1, Cell 1; Phase 2, Cell 1; Phase 2, Cell 2; Phase 3, Cell 1; Phase 3, Cell 2; Phase 3, Cell 4; and Phase 3, Cell 5 North, which is currently being filled. There is one more cell, Cell 5, remaining to be filled.

Passive wells are standing pipes, installed with bentonite seals. There are 2 passive wells per acre for a total of 35 wells, where 6 of the wells were added in the summer of 2022 on the 10 areas that will be capped soon. Fifteen acres are currently capped. There are 4 mobile flares that are moved to control the gas as needed for odor control.

Staff Interview: The landfill started in 1987 and the estimated end of life is in 2029, although the landfill is uncertain about a potential expansion. 40 C.F.R. Part 62, Subpart OOO became applicable on its effective date of June 21, 2021. Currently the mobile flares are on passive wells, GV8, GV31, GV19, and GV16, which are on the top and east portions of the landfill in Phase 3, Cell 1. There have been no odor complaints. There is a leachate system that removes about 4 to 6 million gallons of leachate per year. There are no emission limits in the permit.

The earliest tier 1 report predates Waste Management's acquisition of the landfill. The earliest tier 2 test report available is from the 2000s. All tier 2 test results showed a gas emission rate of less than 34 megagrams per year. The 2016 tier 2 test showed a gas emission rate of 1.36 megagram per year for 2015. For the 2021 tier 2 test, there was no vacuum on the passive wells other than from the Summa canisters. There were no caps on the passive well vents. The caps would have only been needed if there was difficulty pulling a sample from a vent. There was no nitrogen and oxygen corrections made to the 2021 tier 2 calculations. The slopes are shallow, so

they were excluded from the 2021 tier 2 test. There are shallow passive wells currently being installed on the slopes. The depth of the wells ranges from 10 to 40 feet above the liner. Water levels in the passive wells are not measured.

TOUR INFORMATION

EPA Tour of the Facility: No

Data Collected and Observations: In the August 6, 2021 tier 2 test report, non-methane organic compound calculations were not corrected for the concentration of nitrogen or oxygen. The 6th Summa canister, GS-6, showed a nitrogen level of 28.60%, which is above the 20% threshold.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

1. Tier 2 Landfill Gas Sampling and Analysis Report, August 6, 2021

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Annual waste intake for each year since the Landfill started through to the present
- Age of the waste in each cell
- Map of the landfill, showing the type of cover and location of each well
- Depth of each well with the percentage of perforation
- Operating permit
- 2016 tier 2 test report, including any calculations for the 2016 and 2021 tier 2 tests that are not included in the final tier 2 report.

Concerns: The August 6, 2021 tier 2 test results may contain an invalid sample(s).

DIGITAL SIGNATURES

Report Author: _____

Section Supervisor: _____